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1979

PARLIAMENT OF TASMANIA

DEPARTMENT OF MAIN ROADS

REPORT FOR YEAR 1977-78

Presented to both Houses of Parliament by His Excellency's Command

By Authority:
T. J. Hughes, Government Printer, Tasmania



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SECOND ANNUAL REPORT

For the year ended 30 June 1978

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DEPARTMENT OF MAIN ROADS

Director of Main Roads — G. E. C. MCKERCHER

Assistant Director — L. J. BAILY

Secretary — K. G. RASMUSSEN

PRINCIPAL OFFICERS — HEAD OFFICE

Assistant Secretary — R. F. READ

Chief Accountant — F. J. DRAKE

Principal Engineer, Design — C. R. WILLING

Principal Engineer, Construction — D. A. WHARMBY

Division Engineer, Road Design — W. D. COOMBS

Division Engineer, Road Construction — O. A. WILSON

Division Engineer, Bridges — I. A. GAGGIN

Division Engineer, Plant — F. N. LAKIN

PRINCIPAL OFFICERS — DISTRICTS

District Engineer, South-East, Derwent Park — M. G. LINTON

Executive Officer — G. S. GRIGGS

District Engineer, North-East, Launceston — P. A. MEYER

Executive Officer — R. A. PETERS

District Engineer, North-West, Ulverstone — J. H. DRISCOLL

Executive Officer — C. J. MORGAN

DEPARTMENT OF MAIN ROADS

ANNUAL REPORT FOR 1977-78

FOREWORD

The total of Commonwealth and State funds available to the Department for all road purposes in each of the financial years 1974-75 to 1977-78 has remained practically constant in real terms. During this period the level of Commonwealth road grants to the State has declined in real terms and the State has made up the short-fall, partly by an increase in motor taxation, but mainly by allocating substantial amounts of loan funds for road improvements.

The decline in the real level of Commonwealth grants from 1974-75 to 1977-78 has coincided with a Commonwealth decision to allocate a large part of the total annual grants (over 40 per cent) to declared National Roads which comprise only 2 per cent of all roads in the State.

Although, as mentioned above, the State has provided additional revenue and loan funds to compensate for the decline in the real level of the Commonwealth road grants, the large proportion of the Commonwealth grants allocated for national roads has substantially reduced the funds available for other categories of roads. The categories worst affected are rural arterial roads (highways and main roads) and the major urban arterial roads in Hobart and Launceston.

Because of the marked decline in the funds available for urban arterial roads, it has become necessary to confine the works program to the construction of one major project at a time in each urban area.

In Launceston this has already been achieved by concentration of resources on the East Tamar Outlet Road. When this project is completed in 1980 construction will then commence on the Southern Outlet Road from Wellington Street to the Prospect Connector. In Hobart, following completion of the Berriedale interchange, work on the extension of the Brooker Highway north of the Claremont Link Road will be confined to bridgeworks until the Eastern Outlet Road is completed in 1980-81.

In the case of the rural arterial road category, which includes all the State highways and main roads, the needs for improvements far exceed the finance available and unless there is a substantial increase in the level of Commonwealth or State funds, or both, there appears little possibility of carrying out many of the warranted improvements required on these roads.

With the aim of bringing the short, intermediate and longer term priorities for road improvements into better focus, the Department is proceeding with investigations for the development of projected five year and ten year warranted and feasible programs for the following:—

- urban arterial roads in the Hobart and Launceston regions
- national roads
- rural arterial roads and other classified roads.

The Launceston Transportation Revision completed in November 1977 has provided a projected program of urban arterial roads in Launceston, and the other studies will be completed during 1979.

If, as appears likely, the total of Commonwealth and State funds for roads in future years remains constant in real terms, then the possibilities for constructing new roads and carrying out major reconstruction of existing roads in categories other than national roads will continue to be limited, the backlog of needs for improvements to the road system will grow and the position will be worsened by the increasing demands placed on the system by the increases in vehicle numbers. In recognition of this situation, increased emphasis is being given to the maintenance of existing assets, to the review of standards, policies and practices affecting road costs and to the development of low cost methods for rehabilitating roads damaged by log trucks and other heavy commercial vehicles.

FINANCE

General

The financial statements of sources and application of funds presented later in this report are in a format which provides a clearer relationship between receipts and expenditure and is different to that used in previous years. Because of this change in format, corresponding figures for the preceding year are not shown in the statements but such information will be available in future reports.

Motor Taxation

Income from motor taxation was \$12 383 624, an increase of 21 per cent over the preceding year due mainly to an increase in taxation rates effective from December 1977.

Miscellaneous Receipts

Income from this source was \$1 460 030 compared with \$434 353 in 1976-77. The very large increase occurred mainly because of reimbursement by the Commonwealth of expenditure on Tasman Bridge disaster works incurred in previous years.

Commonwealth Grants For Roads

In June 1977 the Commonwealth Government passed the State Grants (Roads Interim Assistance) Act 1977, which provided grants of financial assistance to the States for the construction and maintenance of national roads and other roads for a period of three months commencing 1 July 1977. This legislation was superseded by the States Grants (Roads) Act 1977, passed in September, which provided grants to the States for roads during the three financial years commencing 1 July 1977. The annual grants to Tasmania in each of the three years are as follows:—

	<i>\$ million</i>
National Roads — Construction	7.90
National Roads — Maintenance	0.90
National Commerce Roads — Construction	0.70
Rural Arterial Roads — Construction	3.00
Rural Local Roads — Construction and Maintenance	4.90
Urban Arterial Roads — Construction	2.70
Urban Local Roads — Construction	1.00
Minor Improvements for Traffic Engineering and Road Safety	0.60
TOTAL	21.70

In order to qualify for the above grants, the State is required to expend on roadworks from its own sources an amount of \$12.3 million in each year.

When the legislation was introduced in the Federal Parliament, the Minister for Transport stated that the grants allocated for 1978-79 and 1979-80 would be indexed so as to ensure that the value of the grants was maintained at the 1977-78 level in real terms.

All financial assistance payable under the provisions of the Commonwealth road grants legislation was received during the financial year.

Loan Funds

Loan funds provided to the Department for roads, bridges and other works totalled \$4 383 409, a decrease of 28 per cent on the previous year.

Funds Provided by Other Departments and Authorities

Payments received by the Department for works carried out for other departments and authorities amounted to \$1 523 986 compared with \$493 420 in 1976-77. The increase was due mainly to the Department undertaking major roadworks for the Hydro-Electric Commission on the Pieman River Power Development Scheme and to expenditure on investigation and design of the proposed new Bruny Island Ferry terminals for the Transport Commission.

Total Receipts and Sources of Funds

Moneys received during 1977-78 from all sources amounted to \$44 110 093, an increase of 4.5 per cent over the previous year. The sources of funds and the amounts received are shown below:—

Sources of Funds 1977-78

	\$	\$
State Highways Trust Fund—		
(a) State Motor Taxation, Public Vehicle Fees and Miscellaneous Receipts	14 839 033	
(b) Commonwealth Grants for Roads	21 700 000	
		36 539 033
Loan Funds		4 383 409
Special Commonwealth Funds		602 814
Consolidated Revenue Fund		1 060 851
Funds Provided by Other Departments and Authorities		1 523 986
Total Funds Received		\$44 110 093

Application of Funds

The total funds received from all sources were applied as follows:—

Application of Funds 1977-78

	\$	\$
State Highways Trust Fund—		
Roadworks	29 751 363	
Bridgeworks	6 455 448	
Ferries	73 367	
Second Hobart Bridge	74	
Net increase in funds carried forward—		
Balance 30.6.78	1 069 414	
Less Balance 1.7.77	810 633	
	258 781	
		36 539 033
Loan Funds—		
Roadworks	3 069 387	
Bridges	1 050 613	
Jetties and Facilities for Fishermen	199 982	
Launceston Flood Protection	63 427	
		4 383 409
Special Commonwealth Funds—		
Tasman Bridge Disaster Works	96 766	
Second Hobart Bridge	506 048	
		602 814
Consolidated Revenue Fund—		
Departmental Administration	287 170	
Workers' Compensation (Other Departments)	92 752	
Repairs to Jetties	81 707	
Contributions and Grants for Sundry Buildings and Facilities and Miscellaneous Expenses	474 895	
Other Miscellaneous Expenses Including Recreation Ground Subsidies	124 327	
		1 060 851
Works for Other Departments and Authorities		1 523 986
Total Expenditure		\$44 110 093

State Highways Trust Fund

The State Highways Trust Fund Account is established under the Roads and Jetties Act 1935. The fund is credited with the following moneys:—

- (1) All grants made by the Commonwealth under the States Grants (Roads) Act 1977.
- (2) Funds received by the Department from grants made to the State by the Commonwealth under the Transport Planning and Research (Financial Assistance) Act 1977.
- (3) All State motor taxation.
- (4) The net amount of registration fees for motor vehicles, licence fees for drivers and renewal and transfer fees.
- (5) Public vehicle fees imposed under section 20A of the Traffic Act 1925.
- (6) Revenue from jetties.
- (7) Contributions by Municipal Councils for the maintenance of classified roads.
- (8) Receipts from sale of stores (other than plant).
- (9) Any moneys provided by Parliament for the purposes of the fund.
- (10) Such other moneys (if any) as the Treasurer may direct.

The fund is debited with the following:—

- (a) Expenses incurred in the construction, reconstruction and maintenance of State highways and other classified roads.
- (b) Costs incurred in the maintenance of Council roads which the Minister has agreed to subsidise.
- (c) Contributions to the Bruny, Flinders and King Island Municipalities of portion of the Motor Tax collected in those Municipalities.
- (d) All expenditure incurred under the provisions of the States Grants (Roads) Act 1977, and the Transport Planning and Research (Financial Assistance) Act 1977.
- (e) Costs of stores and materials (other than plant).
- (f) Repair and renewal of bridges on Council roads.

A summarised statement of receipts and expenditure for the State Highways Trust Fund Account for 1977-78 is set out below, together with the corresponding figures for 1976-77:—

State Highways Trust Fund 1977-78

1976-77		Receipts	1977-78
\$			\$
625 782	Balance brought forward	.....	810 633
20 716 000	Commonwealth Grants for roads	.....	21 700 000
10 250 597	Motor Taxation	.....	12 383 624
779 436	Public Vehicle Fees	.....	995 379
434 353	Miscellaneous Receipts	.....	1 460 030
32 806 168	TOTAL	.....	37 349 666

1976-77		Expenditure	1977-78
\$			\$
10 104 324	National Highways	.....	8 392 263
786 133	National Commerce Roads	.....	969 204
7 207 155	Rural Arterial Roads	.....	9 639 855
6 119 930	Rural Local Roads	.....	7 124 882
5 920 326	Urban Arterial Roads	.....	7 334 659
925 341	Urban Local Roads	.....	1 566 905
495 121	MITERS	.....	556 222
527 205	Transport Planning and Research	.....	696 188
289 235	Tasman Bridge Disaster Suspense Account	.....	.....
.....	Second Derwent Crossing Suspense Account	.....	74
521 398	Balance carried forward	.....	1 069 414
32 806 168	TOTAL	.....	37 349 666

Direct Expenditure on Classified Roads

Direct expenditure on the construction, reconstruction, maintenance and resurfacing of State highways, main roads and other classified roads (exclusive of all expenditure on bridgeworks) amounted to \$20 839 870, an increase of 3.5 per cent on the preceding year. Expenditures in each District are shown in Annexure A.

Loan Fund Expenditure

The loan funds of \$4 383 409 allocated to the Department for roads and bridges and other works were applied as follows:—

1976-77													1977-78
\$													\$
5 848 620	Roads and Bridges	....	....	....	....	....	....	....	....	....	....	....	4 120 000
227 236	Other Works	....	....	....	....	....	....	....	....	....	....	....	263 409
6 075 856	TOTAL	....	....	....	....	....	....	....	....	....	....	....	4 383 409

A schedule of expenditure items and amounts is shown in Annexure B. It should be noted that the loan fund amounts for the road and bridge items listed in the schedule were in all cases supplemented by funds from the State Highways Trust Fund.

Financial Assistance to Local Government Authorities

Under the provisions of the States Grants (Roads) Act 1977 and the Roads and Jetties Act 1935 the Department made direct grants to local government authorities for construction and/or maintenance of roads controlled by Councils. The direct grants to Councils totalled \$5 081 677, an increase of 33.5 per cent over the amount of the direct grants provided in 1976-77. The large increase in the direct grants was brought about by increases in the Commonwealth grants for rural local and urban local roads.

In addition to the direct grants, the Department also provided indirect financial assistance to local government authorities. Under the provisions of the Roads and Jetties Act the Department financed the repair and renewal of bridges on Council roads and carried out these bridgeworks. The Department maintained those Council roads which have been declared as subsidised roads and provided funds to the National Parks and Wildlife Service for work on Council roads. The indirect financial assistance to Councils totalled \$1 259 972, an increase of 20 per cent over the preceding year.

The total of direct grants and indirect financial assistance to Councils was \$6 341 649, an increase of 31 per cent over 1976-77. The amounts of the direct grants and indirect financial assistance to Councils for the various categories of roads and works are shown in Annexure C.

In previous years the direct grants to local government authorities for works on Council roads were paid only after the particular works for which the grants were provided had been completed and inspected by Departmental staff. This procedure for payment only on completion of works caused heavy workloads for both Councils and the Department towards the end of the financial year and budgetary control difficulties for the Department.

During 1977-78 arrangements were made for the direct grants to local government authorities financed from Commonwealth funds to be paid quarterly. The arrangements included controls to ensure that the works for which the grants are made are subsequently completed to the satisfaction of the Department and in accordance with the requirements of the Commonwealth Act. The new procedure for regular quarterly payment of Commonwealth funded grants to local government authorities has greatly simplified the administration of grants for both the Department and the Councils.

In 1978-79 it is intended to amend the Roads and Jetties Act so that the direct grants to Councils financed from State funds can also be paid quarterly on the same basis and subject to the same controls as now apply to the Commonwealth funded grants.

PLANNING AND DESIGN

Launceston Transportation Revision 1976-77

This comprehensive revision of transport needs in the Launceston area was carried out under the direction of a management structure including representatives from the department, other government Departments and authorities and local government bodies. The main objective was to review the plans proposed by the 1967-68 Launceston Area Transportation Study and develop a medium term transport plan which was both acceptable to the community and financially feasible.

Throughout the revision various approaches were used to achieve effective community participation in the identification and assessment of transport problems and their solutions. From an examination of several feasible options and consideration of economic, environmental, engineering and planning issues a recommended road plan for the next ten years was developed within the financial resources expected to be available (approximately \$2 million per annum).

The report of the revision was published in November 1977 and the recommended road plan and program were subsequently adopted in principle by the State Government and by the local government bodies. The recommended road plan includes the following key elements:—

- East Tamar Outlet Road with connections to Mowbray and Alanvale.
- Eastern By-pass Road from East Tamar Highway to St Leonards plus improvements to St Leonards Road, Station Road and Quarantine Road.
- Southern Outlet Road commencing in Wellington Street (south of Glen Dhu) through to Strathroy Bridge with connections to Prospect and Kings Meadows.
- Reconstruction of Henry Street on a new alignment and upgrading of connections to Cimitiere Street.
- Completion of Bathurst-Wellington Street Couplet with connecting roadways to Cimitiere Street.
- Upgrading of Talbot Road-High Street.
- Upgrading of the West Tamar Highway.

Following adoption of the recommended road plan, the State Government announced a decision to provide additional funds and thereby achieve earlier completion of the East Tamar Outlet Road and earlier commencement of the next major project. As a result of that decision the East Tamar Outlet Road through to Alanvale will now be completed in December 1980, about one year ahead of the original program, and construction will then commence on the Southern Outlet Road and the Prospect Connector.

Derwent Region Transportation Study

The Department's road programs in the Southern Metropolitan Area were guided from 1964 to 1970 by the Hobart Area Transportation Study (H.A.T.S., 1964) and since 1970 by the Hobart Transportation Revision (H.T.R., 1970). A second revision, planned for 1975, was postponed following the Tasman Bridge disaster. In October 1977 a new study, encompassing and replacing the proposed second revision, was commenced. The study area includes the cities of Hobart and Glenorchy and the municipalities of Clarence, Kingborough, Brighton, New Norfolk, Richmond, Sorell and Huon.

The basic purpose of the study is to develop a program of road improvements required in the decade 1980-1990. This advice cannot be developed in isolation from other transport factors and, besides major road needs, the study is examining the public transport system, considering the problems of commercial vehicle operation and looking for opportunities to help cyclists and pedestrians. Parking policies, and the relationship between land use and transport investment, are also under examination.

In view of its broad scope and the need for co-operation between all service authorities in transport planning, the study is managed by a committee of representatives from the Department, the Transport Commission, Metropolitan Transport Trust, Town and Country Planning Commission, the Department of Housing and Construction and the four larger local authorities in the region — Hobart, Glenorchy, Clarence and Kingborough. The study is being co-ordinated by an officer seconded from the Commonwealth Bureau of Transport Economics.

The initial period was spent identifying the issues and setting up the appropriate study to examine them. During this period wide-ranging discussions were held with State and local government agencies and with community groups. Formal investigations were commenced in April 1978 by a study team consisting of specialist consultants and officers drawn from participating agencies. Six consulting firms are involved in different aspects of the study.

The Management Committee has frequent liaison with local governments throughout the region. Further guidance is provided by a Consultative Committee of representatives from private organisations interested in transport. The public, through existing community groups and individual contact, are involved in all aspects of the study.

The study program calls for a short period of region-wide investigations followed by detailed investigations in each municipality in the region. At 30 June 1978, these 'local area' investigations had commenced in all municipalities and are expected to be completed in December. The study will be completed early in 1979.

Cross-Derwent Travel Study

Prior to the re-opening of the Tasman Bridge the Department undertook a survey of the persons crossing the Derwent River. The purpose of the survey was to provide information for a prediction of the modes of travel the public would use after the Tasman Bridge re-opened to traffic. The survey information was analysed using a mathematical model developed in conjunction with the Australian Road Research Board. The predicted personal movements from East to West between 6 a.m. and 9 a.m. following re-opening of the Tasman Bridge were:—

<i>Ferry and Punt</i>	<i>Bailey Bridge</i>		<i>Tasman Bridge</i>		<i>Total</i>
	<i>By Bus</i>	<i>By Car</i>	<i>By Bus</i>	<i>By Car</i>	
1 100	100	500	2 900	8 800	13 400

The actual movements surveyed for the same period and direction of flow one month after the Tasman Bridge was re-opened were:—

<i>Ferry and Punt</i>	<i>Bailey Bridge</i>		<i>Tasman Bridge</i>		<i>Total</i>
	<i>By Bus</i>	<i>By Car</i>	<i>By Bus</i>	<i>By Car</i>	
915	115	703	2 597	7 139	11 469

Project Planning

East Tamar Outlet Road (Mowbray to Alanvale)

A major review of the planning for this project was carried out to provide advice to the Launceston Transportation Revision 1976-77 and the committee co-ordinating the planning of educational facilities at Newnham and Alanvale. The feasibility of various alternative lay-outs for the Alanvale Connector to the East Tamar Highway were assessed, together with proposals for the provision of vehicular and pedestrian connections to and between the proposed educational institutions. As a result of these and other investigations the committee agreed that the Alanvale Connector would not prejudice effective planning in the area and objections to the proposed link were withdrawn.

Launceston Southern Outlet Road (Wellington Street to Strathroy Bridge)

The road program developed by the Launceston Transportation Revision 1976-77 proposed that the Southern Outlet Road be constructed in stages over the period 1981 to 1988. In May 1978 the section from Strathroy Bridge to the Prospect Connector, together with the Connector, was declared as part of the National Highway linking Hobart and Burnie. As a consequence of the declaration the priority for construction has been advanced and the entire road from Strathroy Bridge through to Wellington Street is now programmed for commencement in 1980-81 and completion in 1982-83. Planning and design of the Southern Outlet and the Prospect Connector are in progress to meet the revised construction program.

Deloraine By-pass

Following three years of investigations a highway planning report was prepared and forwarded to the Commonwealth Minister for Transport in Canberra for approval of the By-pass as part of the national highway program. The report, which examined five alternative routes, is still under consideration by the Commonwealth.

Bass Highway (Launceston to Deloraine)

Preliminary investigations have been made of possible new alignments for future reconstruction of this section of the Bass Highway to national highway standards. Ten different routes (with some sections common to two or more routes) were developed but several of these will be rejected without more detailed investigations. The routes examined included proposals for by-passes of Carrick, Hagley, Westbury and Exton. It is not intended to proceed with ground survey and more detailed investigation and design until the future construction program is more clearly defined.

Environmental Studies

Hastings Caves Tourist Road

An environmental assessment was carried out on the proposal to improve and seal this road. It was concluded that the improvements would be environmentally acceptable and the Tasmanian Department of the Environment will be requested to approve the project.

Lilydale Main Road

The impacts of two alternative proposals at Underwood, a new deviation or upgrading the existing road, were assessed. The deviation has a significant adverse impact on Hollybank Forest Park and it seems likely that upgrading the existing road will be adopted. A firm decision has not yet been made.

Cradle Mountain Tourist Road

A draft environmental impact statement for the proposed upgrading and sealing of the section of road from Cethana turn-off to Pencil Pine Creek was completed. This statement will be forwarded to the Department of the Environment for approval.

Bruny Island — Proposed New Ferry Terminal at Roberts Point

An environmental report on the implication of the proposed new roadworks and ferry terminals being planned for the Transport Commission was completed and approved by the Department of the Environment. However, the Government decided not to proceed with the project at the present time.

Right-of-Way Control

The administration of road reservations is becoming of increased importance, especially in regard to the protection of future road proposals. In order to supplement the Department's powers on new roadside development, co-operation is sought from the Town and Country Planning Commission and Local Government. This is of particular importance when insufficient planning has been completed to enable accurate definition of new boundaries. Service and other installations within the road reservations of the classified road system are monitored and requirements specified and recorded.

Road Design

Hobart Eastern Outlet Road (Rosny Hill to East Warrane)

Final design work and preparation of construction plans has continued. Careful consideration has been given to the at-grade connection to the existing street network at East Warrane. The difficulty of providing safe at-grade crossings on high speed highways is recognised and all reasonable measures are being taken to overcome this problem.

Ulverstone By-pass—Bass Highway

Further design work was carried out on this section of the National Highway, in particular at the point where the eastern end of the By-pass joins the existing Bass Highway. A number of proposals for the interchange layout were investigated during design.

Midland Highway

Detailed design of this highway to national highway standards continued during the year and has included development of plans for the Spring Hill section, a review of the Kempton By-pass and investigation of a number of alternative routes in the vicinity of Jericho. The review at Kempton resulted in provision of an overpass at Grange Road where previously an at-grade junction had been planned.

Other Road Design Projects

In addition to the above projects, design has continued on a section of the Huon Highway between Geeveston and Huonville, the Tasman Highway between Scottsdale and Ringarooma, the Waratah Highway between Somerset and Yolla and the Nubeena Secondary Road between Nubeena and Port Arthur. Design has been completed on the Channel Highway between Margate and Snug and the Longford Deviation of the Illawarra Main Road. Other major projects on which some design and investigation has been carried out during the year include Blessington Main Road through St Leonards (to urban standards), Elderslie Main Road, the Strahan to Zeehan Road and the Rossarden Secondary Road.

In addition over fifty minor projects, including those in the MITERS category, have been investigated and in many cases detailed designs have been completed.

Bridge Design

Designs and drawings were prepared for eleven new bridges and overpasses, three pedestrian overpasses and subways and twelve large culvert structures. Significant structures designed were:—

- South Esk River Bridge and associated floodway bridge on the Longford Deviation of the Illawarra Main Road.
- Overpasses at Preston Main Road and Castra Main Road on the Ulverstone By-pass.

At the end of the year design was in progress for ten bridges and large culvert structures.

Traffic Services

The State-wide traffic counting program continued throughout the year. A total of forty-three permanent and semi-permanent counting stations were maintained and information was also obtained from approximately 1 000 coverage counting stations. A new computer program for processing traffic count data has been developed and is operating satisfactorily.

A booklet was published giving traffic count data at nearly all traffic counting stations on the classified road system. This publication has proved useful to other departments and authorities and Municipal Councils and has reduced the number of enquiries made to the Department for information on traffic volumes.

Special traffic surveys were made during the year to provide information for planning and design of road improvements. These included intersection turning movement counts, traffic classification counts, video camera surveys, vehicle speed surveys, pedestrian counts, vehicle delay surveys and some special one week vehicle volume counts.

A total of 3 042 permits were issued for the movement of overweight and/or over-dimension vehicles. This figure compares with the three previous years as follows:—

1974-75	....	....	....	....	....	....	....	....	3 369
1975-76	....	....	....	....	....	....	....	....	3 049
1976-77	....	....	....	....	....	....	....	....	2 763

Policing of the regulations limiting axle loads and vehicle weights and dimensions was carried out on behalf of the Department by the Transport Commission in conjunction with the policing of the general transport regulations. The Commission detected and prosecuted 254 infringements and the fees and special penalties levied by the Courts amounted to \$32 159. The costs incurred by the Department in policing the regulations were:—

										\$
Contribution to Transport Commission	....	....	....	....	....	....	....	....	....	65 000
Provision of weighing facilities	....	....	....	....	....	....	....	....	....	26 440
Maintenance of weighing facilities	....	....	....	....	....	....	....	....	....	7 612
Total expenditure	....	....	....	....	....	....	....	....	....	\$99 052

Road Lighting

Following investigation of road lighting policies and warrants in other States, and discussions with local government authorities, a revised policy was established for the installation and maintenance of lighting on classified roads. All local government authorities have been advised of the new policy and provided with general guidelines setting out the warrants and design standards for road lighting and the responsibilities for the costs of installation and maintenance. In general the warrants laid down in the policy for the provision of road lighting are less stringent than those applying in other States.

Subject to the provisions of the warrants prescribed in the policy being met, the Department accepts full responsibility for the installation, operation and maintenance costs for road lighting on freeways and interchanges, expressways and access controlled divided carriageway roads, access controlled single carriageway roads and channelised intersections. For classified roads of these classes where the warrants are not met and a Council desires to have lighting installed, then the Department accepts responsibility for lighting on a \$ for \$ basis with the particular Council.

For classified roads of other classes where the provisions of the warrant are met, the Department may accept responsibility for lighting on a \$ for \$ basis with the Council. If the provision of lighting is not justified under the warrants and a Council requires lighting to be installed, then that Council must accept total responsibility for installation, operation and maintenance.

The new policy is generally more equitable than the previous policy and avoids ambiguity which previously existed concerning the responsibility for the costs of road lighting.

Hydraulic Investigations

Hydraulic investigations were carried out on a total of 100 km of road alignment prior to preparation of designs for construction or reconstruction. The roads investigated included sections of the Midland, Bass, Channel and Waratah Highways, the Longford Deviation on the Illawarra Main Road and the Zeehan-Strahan Road.

Forty-eight separate hydraulic investigations were made for bridges and culverts, including bridges over the South Esk River on minor roads and bridges on the Lyell Highway and the Cradle Mountain Road. Advice and assistance was provided to the Forestry Commission in connection with two bridges to be constructed on a new Forestry road in the north-east of the State.

A total of thirty-eight investigations were carried out for the Department and for other departments and authorities in connection with subdivisional drainage, drainage of school and hospital sites, erosion control structures and roadside sewage treatment plants. Advice and assistance was provided to the Oatlands Council in raising the Lake Dulverton weir, and a special hydraulic report was prepared on the Bowen Park development for the National Parks and Wildlife Service.

New Terminals for Bruny Island Ferry

Investigation and design of proposed new ferry terminals and associated works have been carried out for the Transport Commission. Extensive investigations in 1976-77 resulted in a decision to locate the new terminals at Kettering and Roberts Point and to construct a road from the latter terminal to the Bruny Main Road. During 1977-78 designs, drawings and tender documents were completed for the new terminals and associated works and for the road from Roberts Point to the Bruny Main Road.

Evidence on the proposed terminals and other works was presented to the Parliamentary Standing Committee on Public Works which subsequently issued a report recommending the proposals at an estimated cost of \$2.87 million, and with some modifications at the Kettering site estimated to cost an additional \$13 000.

Expenditure on the project in 1977-78 amounted to approximately \$206 000 mainly for consultants' fees and for advance purchase of some construction materials.

Naracoopa Jetty

A study was commenced for the Treasury on the feasibility of reducing the size of this 220 metre long jetty or dispensing with it. The only purpose of the jetty at present is to provide a launching platform for a floating pipeline to tankers which call infrequently and anchor to supply oil to on-shore storage tanks. The study is continuing and may take some time to complete if provisions have to be developed for continuation of the present method of oil delivery.

Launceston Flood Protection

The Department continued to provide engineering liaison for capital works and maintenance of the flood protection system being carried out by the Launceston City Council in accordance with the agreement with the State. Capital works included topping up some levee banks and work on out-fall structures in the city levee at Charles Street and in the Scottsdale levee at Churchill Park. Funds provided to the Council for capital works amounted to \$63 427.

Marine Board Works

Plans and specifications for loan fund works proposed by the Marine Boards of Burnie and Circular Head were examined for the Transport Commission. The proposals at Burnie were for the upgrading of crane facilities, deepening of the berths at McGaw and New Jones piers and re-surfacing of the ferry terminal yard. The proposal for Circular Head was the replacement of a fender system.

An examination was also made of information provided by the Marine Board of King Island in connection with the slipway at Currie and some engineering advice and assistance were provided to the Board.

CONSTRUCTION, MAINTENANCE AND OPERATIONS

Major Roadworks Completed

A feature of the year's construction program was the completion of reconstruction of the 40 km length of the Bass Highway between Deloraine and Latrobe. The highway traverses highly developed agricultural land in the Deloraine and Sassafras areas and the reconstruction required extensive ancillary works including improvement of side road junctions, alterations to private accesses, provision of stock routes and stock underpasses, alterations to drainage and irrigation channels and re-location of some commercial and recreational facilities.

Other major works completed during the year were:—

- Construction of the north-bound carriageway of the West Tamar Outlet Road from Paterson Bridge to Riverside.
- Duplication of Marine Terrace, Burnie, from Edward Street to Reeve Street. This forms part of the duplication westward to the Emu River Bridge and construction on the western section will continue during next year.

Ulverstone By-pass

Road construction work on this 7.20 km long by-pass was concentrated mainly on the section between the Leven River and the Castra Main Road. The major cutting at Heazlewoods Hill was excavated and earthworks and drainage between the Leven River and Preston Main Road were substantially completed. The deviation of Henslowes Road was completed and opened to traffic. Road construction work on the western side of the Leven River was limited to the area of the South Road interchange where earthworks and associated drainage were carried out.

The drainage works carried out on the section between the Leven River and the Preston Main Road included near-completion of a 425 metre long twin 1.80 metre diameter pipe conduit for the deviation of Masons Creek. This large conduit includes an accelerator section at the inlet and a decelerator section with a dissipator basin at the outlet. Rock pitching was installed down-stream from the dissipator basin to provide protection against scour.

Bridge construction work on the By-pass included commencement or continuation of work on the following structures:—

- a 162 metre long six span bridge to carry the By-pass over the Leven River
- a single span overpass for the South Road interchange at the western end of the By-pass
- a three span overpass for grade separation of the By-pass and the Preston Main Road
- pedestrian underpasses at Henslowes Road and Wright's Road.

The By-pass is programed for completion early in 1981.

East Tamar Outlet Road

Work continued on construction of this new 6.20 km long outlet road from the city centre to connect with Invermay Road at Mowbray and with the East Tamar Highway at Alanvale. By the end of the year the embankment along the river flats from Lytton Street to the Mowbray Connector had been constructed and surcharged to achieve a higher rate of settlement and part of the embankment along the river bank from Mowbray through to the site of the Maritime College had also been placed. Instability of the river bank at Stevensons Bend requires construction of a retaining structure to support the roadway embankment and the sheet piling for this was driven during the year.

On the city to Mowbray section a two span forty-seven metre long overpass to elevate Mayne Street over the outlet road was completed and work commenced on construction of a large triple cell reinforced concrete box culvert at Newnham Creek on the section from Mowbray to Alanvale.

The section of the outlet road from the city through to Invermay Road at Mowbray is scheduled for opening to traffic in April 1979 and the entire outlet road through to the East Tamar Highway at Alanvale is expected to be opened in December 1980.

Hobart Eastern Outlet Road

Earthworks for the cutting through Rosny Hill were completed to the stage necessary for construction of the overpass for the Rosny interchange and a temporary road for Bellerive-bound traffic was constructed clear of the site of the overpass structure. The ramps for traffic from Bellerive and Montagu Bay were completed and the new access road to the Panorama Motel was constructed. Earthworks and drainage works were continued on the section from Gordons Hill Road to Dampier Street. Bridgeworks carried out included completion of the 25 metre long single span overpass over East Risdon Road and completion of a 203 metre long single cell box culvert at Kangaroo Creek. Good progress was made on construction of the Rosny Hill overpass and at the end of the year all the pre-cast sections of the 60 metre long two span box girder superstructure were in position on falsework ready for concreting of the joints prior to stressing of the cables. The overpass is scheduled for completion in October 1978.

The entire 3.30 km long outlet road from Rosny Hill through to Mornington is programed for completion by December 1980, subject to availability of funds.

Hobart Northern Outlet Road

Work continued on the 2.7 km long section from the end of the Brooker Highway at Berriedale through to the Claremont Link Road and in December 1977 this section and some lanes of the Berriedale interchange were partially completed and opened to traffic. Final surfacing of the newly-opened roads was carried out under traffic and work continued on retaining walls and other works required for completion of the interchange. As a consequence of developments in the Berriedale area since the interchange was first planned it has become necessary to amend the design and defer completion and opening of some sections of this facility.

Bridgeworks carried out were the construction of the Jimbri Street pedestrian bridge and replacement of the superstructure of the Claremont rail underpass on Main Road near its junction with the Claremont Link Road. The old and sub-standard steel and concrete deck of the underpass was replaced with a wider pre-stressed concrete superstructure designed to suit the junction of Main Road and the Link Road.

Midland Highway

Reconstruction of the 36.4 km long section from Mangalore to Oatlands continued throughout the year with work in progress over sections totalling 13.8 km. On the section from Kempton to Melton Mowbray the final seal coat was placed over the temporary winter seal and traffic facilities were completed. Construction continued on the section from Melton Mowbray to Lovely Banks and parts of this section were opened to traffic by provision of temporary connections from the old line of the highway. Fencing the reservation, drainage works and some preliminary earthworks were carried out on the section from Lovely Banks to Spring Hill. Culverts were completed at Quoin Rivulet, Summerfield Creek and Serpentine Creek and a stock underpass was constructed at Lovely Banks.

On the northern end of the highway an overtaking lane was constructed from Strathroy Bridge to the Evandale Main Road junction at Breadalbane.

Illawarra Main Road

The existing alignment of this main road crosses the South Esk River near Longford via the Long Bridge and a branch road into the town crosses the river via Kings Bridge. Both these timber structures are now sub-standard and due for replacement. The bridges and their road approaches are also subject to frequent flooding which causes delays to traffic.

Following extensive hydraulic investigations and preliminary design studies construction was commenced on a new river bridge and floodway bridges for a 2.6 km long deviation of the main road which will provide improved access to Longford and permit demolition of the two timber bridges over the river. The work carried out this year consisted of earthworks for the abutment embankments and construction of foundations for the 181 metre long six span river bridge.

Cimitiere Street Overpass, Launceston

This 151 metre long six span overpass will carry city-bound traffic from Charles Street Bridge into Wellington Street over an extension of Cimitiere Street. Following delays in previous years due to priorities of bridgeworks on the East Tamar Outlet Road construction work proceeded continuously during this year. At the end of the year one abutment and three piers had been completed, thirty-two pre-stressed concrete girders had been cast and fifteen girders had been erected. The overpass is scheduled for completion in December 1979.

Strahan-Zeehan Road

Construction of this 42 km link commenced in 1975-76. Except for two major deviations the alignment of the new road follows the line of the old railway formation which has been converted to a narrow roadway and is used by a limited number of vehicles. Work on the project this year was concentrated on the Professor Deviation where earthworks were completed for 3.6 km of the 5.1 km length and part of the pavement was placed.

Access Road to Stringer Creek Dam

At the request of the Hydro-Electric Commission, and with funds provided by that authority, the Department commenced reconstruction of part of the Granville Harbour Road and a track to provide access to the site of the Stringer Creek Dam on the Pieman River. The reconstruction, which commenced in March 1978, involves widening and strengthening of 44 km of road and track and the replacement of several timber bridges. The work is required to be completed by December 1978 for transport of equipment, materials and personnel to the dam site.

Road Reconstructions

Reconstruction was continued or was commenced on the following classified roads:—

Huon Highway

Work continued on reconstruction of the section from Geeveston to Franklin and was completed as far as Sorell Street, except for improvements to the Whale Point Road junction.

Tasman Highway, North

Reconstruction continued on the section from Lings Siding towards the Ringarooma turn-off. Earthworks were completed to Launceston 74.2 km and sealing was carried out on the section from Launceston 68.2 km to 71.4 km.

Channel Highway

Construction was commenced on improvements to the alignment of the highway between Margate and Snug. A deviation just south of Margate was completed ready for sealing and earthworks and drainage were carried out on other sections. Reconstruction of the 4.5 km section from Margate to Snug is scheduled for completion in 1978-79.

Waratah Highway

Reconstruction continued on the section from Somerset to Yolla and a length of 3.1 km from Old Cam Road to Village Lane was completed. To assist the Wynyard Council, a section 0.8 km long in Yolla was reconstructed to match the Council's program for construction of stormwater drains, kerbs, gutters and footpaths.

Blessington Main Road

Work continued on reconstruction of the urban section of this road from the Tasman Highway to St Leonards township. Reconstruction was completed from the highway to Hutton's factory and earthworks and pavement through to Lewis Street were nearing completion.

Lilydale Main Road

Reconstruction and realignment of this road to Rocherlea and Prossers Forest Road continued during the year. The section from Launceston 12.2 km to 13.6 km was sealed and earthworks and drainage were completed on the section from Launceston 9 km to 12.2 km.

Nubeena Secondary Road

The approaches to the Taranna Creek Bridge were constructed and sealed and paving and sealing was carried out on the section from Port Arthur 16.2 km to 11.8 km. These works completed reconstruction of the section from Taranna to Nubeena. Earthworks, drainage and some pavement works were carried out over a length of 6.5 km from Nubeena towards Port Arthur.

Tasman Highway, South

Reconstruction and sealing was completed over a length of 3.4 km between Triabunna and Wattle Paddock Creek.

Storys Creek Secondary Road

Heavy earthworks and drainage were carried out for widening and sealing of 7 km of the steep sidling section of this road between Avoca 13 km and 6 km.

Bridge Construction

The following bridgeworks were completed during the year:—

<i>Name</i>	<i>Road</i>	<i>Cost</i>
		\$
Masons Creek Culvert	Ulverstone By-pass, Bass Highway	498 972
East Risdon Road Underpass	Eastern Outlet Road, Warrane	418 104
Kangaroo Bay Rivulet Culvert	Eastern Outlet Road, Warrane	357 571
Derwent Park Road Rail Underpass	Derwent Park Road, Lutana	116 302
Jimbirn Street Footbridge	Northern Outlet Road, Claremont	110 898
Plains Creek Bridge	Lake Leake Main Road	106 835
Farrell Rivulet Bridge	Zeehan Highway	102 585
Summerfield Creek Culvert	Midland Highway	90 307
Claremont Rail Underpass	Main Road, Claremont	74 788
Serpentine Valley Creek Culvert		
No. 2	Midland Highway	52 309
Hang Dog Creek Culvert	Tasman Highway	51 504
Parr Rivulet Culvert	Tasman Highway	47 883
Summerfield Creek Culvert	Lake Highway	37 572
Pinnacles Creek Bridge	Lake Leake Main Road	34 498
Henslowes Road Subway	Ulverstone By-pass, Bass Highway	32 244
Serpentine Valley Creek Culvert		
No. 1	Midland Highway	32 103
Maryville Flat Culvert	Tasman Highway	30 760
Culvert No. 5638	Tasman Highway	28 364
Great Forrester Creek Culvert	Tasman Highway	25 364
Lovely Banks Stock Underpass	Midland Highway	22 155
Culvert No. 1213	Tasman Highway	22 002

Tasman Bridge

The repaired and widened Tasman Bridge was re-opened to traffic in October 1977 but certain works, including provision of a new inspection and maintenance gantry and strengthening and painting of balustrades, remain to be carried out. Until all work has been completed and contracts finalised, the bridge will remain the responsibility of the Joint Tasman Bridge Restoration Commission.

Following the discovery of some ungrouted sections of pre-stressing tendons in several piers during the last detailed inspection of the bridge in 1972 an investigation was made by the Department and consulting engineers. Although the report of the investigation indicated that there is no cause for concern about the integrity of the piers, it recommended that a further more detailed investigation be undertaken over the full length of all tendons in certain piers in order to assess the precise extent of ungrouted tendons. This detailed investigation requires the development and application of special detection and measuring techniques and evaluation of several possible techniques is being carried out by the Australian Road Research Board in association with The Broken Hill Proprietary Company Limited and Monash University. Field tests of selected techniques will be carried out when the new inspection gantry is available.

Batman Bridge

Re-painting of the steel truss girders and deck steelwork was resumed during the summer and is now approximately 70 per cent complete. The exacting task of inspection and maintenance of the tower and cables is scheduled for next year and work this year was confined to preparation and modification of the inspection equipment and development of procedures for inspection and maintenance.

Bridgewater Bridge

River traffic required 892 operations of the lift span, a decrease of 5.5 per cent on the previous year. Operations for tugs and barges totalled 600, a decrease of 19 per cent on 1976-77. Contrary to predictions, the re-opening of Tasman Bridge had a negligible effect on road traffic, which remained at a very high level.

The wire cables supporting the lift span and counterweights were subject to a detailed inspection which confirmed a previously reported need for replacement of all cables. Preparatory work for replacement of the cables was completed in readiness for replacement of the first group in the spring of 1978 and the remaining two groups in the autumn of 1979. As the replacement will involve immobilisation of the lift span and partial closure of the bridge to rail and road traffic, the work will be carried out mainly at weekends.

An underwater inspection of the bridge revealed that scour of the river bed in the vicinity of the approach span piers is apparently stabilised and all timber piles beneath the pier foundations have adequate cover.

Denison Canal Bridge

There were 868 operations of the swing span for passage of vessels compared with 678 in the previous year. Safety for vessels using the canal has been improved by the installation of a new system of navigation lights on the northern approach which are more readily distinguishable in conditions of bright early morning sun. Greater convenience for mariners has been provided by a telephone extension to the bridge control room and a marine transceiver which permits direct communication between the Canal Superintendent and approaching vessels.

Risdon Ferry

Operation of the ferry continued on a two shift basis until the Tasman Bridge was re-opened in October 1977 and was then reduced to one shift per day. Because of declining patronage and rapidly increasing costs the ferry was taken out of service in January 1978 and the ferry vessel and loading ramps at the terminals will eventually be offered for sale.

Road Maintenance

Because of the importance of preserving existing assets an increasing proportion of total road funds is being allocated to the maintenance and re-surfacing of existing roads. During the year there was further extension of the area maintenance system which is being implemented over a number of years to spread the costs of establishing area maintenance depots around the State and providing the necessary plant and equipment. In many areas of the State the principal maintenance problem remains the repair of damage caused by log trucks operating on roads constructed before the advent of the woodchip industry.

Bituminous Surfacing

Sealing, resealing and asphalt work carried out on classified roads is shown in Annexure D.

Investigations and Materials Testing

The Materials and Research Section continued to provide investigatory testing and consultative services for the construction and maintenance activities of the Department and also provided services to other departments and authorities. Work carried out included testing of soil for route selection of roads, testing of materials and preparation of designs for road pavements, design of concrete mixes, compliance and control testing of a wide range of construction materials, assessment of new products and field investigations of construction and maintenance problems.

Site investigations and associated soil testing were carried out for several major road projects, ten bridges, three major buildings, ferry terminals and a number of other proposed works. Benkelman beam surveys and associated testing were carried out on road construction projects and on 66 km of existing roads.

Landscaping

Approximately 14 000 plants and trees grown in the Department's nursery were used on landscaping of new works or existing roads. In addition 3 000 trees were purchased for planting and maintenance by the Housing Division on the reservations of the East Derwent Highway through the Bridgewater housing development and on the Rokeby By-pass through the Clarendon Vale housing development.

Jetties and Wharves

Construction of a new jetty at Kettering was completed at a cost of approximately \$51 000 and a new jetty on Isle of the Dead at Port Arthur was constructed for the National Parks and Wildlife Service at a cost of approximately \$35 000. The latter jetty is used mainly by the cruise vessel based at Port Arthur.

Work continued on the progressive reconstruction of the 126 metre long Smithton Wharf. The central section was completed and pile-driving was carried out on the northern section.

CONSTRUCTION PLANT AND WORKSHOPS

General

Section 6 of the Roads and Jetties Act requires the keeping of a Road Construction Plant Suspense Account for the purpose of operating, maintaining and replacing plant and equipment required for the construction and maintenance of roads, bridges and other works. This Account is the trading account for the Plant Division, which provides the plant and equipment required for the Department's operations and controls the central and regional workshops. The Division charges hire for use of its equipment and makes charges for fabricated items and other work provided by the workshops.

The Account is credited with the amounts charged by the Division for plant hire and workshop production and with the net profits from the sale of plant, equipment and stores. The Account is debited with all costs incurred in connection with the operation and maintenance of plant and equipment, all costs and expenses incurred for replacement or renewal of plant and equipment and all workshop costs.

The Plant Division operates on a March to March financial year and the information and accounts referred to in this section of the Department's annual report are for the twelve month period ending 26 March 1978. The March to March financial year for the Plant Division is adopted to simplify administration, accounting and financial reporting.

Plant Operations

Plant usage was higher than in the preceding year and this, together with a 12½ per cent increase in plant hire rates which became effective half way through the year, resulted in a total hire income of \$6 133 099, and increase of 16.5 per cent over the previous year. The total number of drivers and operators employed on plant operations remained static at 202.

The total value of plant replacements purchased during the year amounted to \$1 251 047 and the total value of additional plant purchases was \$351 294. The additional plant items consisted mainly of 4 tonne and 2 tonne trucks and light vehicles for use by road maintenance organisations in the districts.

Workshops

Workshop production earnings amounted to \$4 138 605, an increase of 21 per cent on the previous year. Workshop loaded rates were increased by 20 per cent early in the year and this was the first increase since

November 1974. No major steel fabrication work for bridges was carried out during the year but projects of note included the movable median on the eastern approaches to Tasman Bridge, fabricated steelwork for the Scamander River Bridge footway and fabricated steelwork and other components for slipways at Dover and Dunalley. Thirty-six steel explosive magazines were manufactured and issued to districts to replace the older, less secure type.

Financial Statements

Financial statements for the Road Construction Plant Suspense Account are given in Annexure E, together with the corresponding figures for the preceding year.

The statements include a statement of income and expenditure, the balance sheet and a statement of sources and application of funds. The statement of income and expenditure reveals a surplus or profit of \$790 452. An amount of \$500 000 from this surplus has been transferred to the Plant Replacement Reserve.

Apprentices

Twelve apprentices completed their terms of indenture at the end of 1977 and two were retained as tradesmen. Fifteen new apprentices commenced training early in 1978 and there are currently sixty-six apprentices employed in Departmental workshops around the State. The numbers of apprentices at each of the workshops are as follows:—

Moonah	....	....	....	....	....	....	....	....	30
Launceston	....	....	....	....	....	....	....	....	16
Ulverstone	....	....	....	....	....	....	....	....	20
Total	....	....	....	....	....	....	....	....	66

ADMINISTRATION

General

The division of the former Department of Public Works affected mainly the central administrative sections of the Department and many adjustments were necessary to meet the changing responsibilities. During 1977-78, the first full year of operation of the new Department of Main Roads, the need for some further adjustments has become apparent and steps have been initiated to re-examine the work loads of various administrative and accounting sections. It is expected that the review of these sections will result in some staff re-grouping during 1978-79.

Staff

At 30 June 1978, there were 424 positions on the Department's establishment and the actual number of staff employed was 401.

The composition of this staff was:—

Administrative officers, accountant and clerical officers	108
Engineers	79
Surveyors and survey staff	34
Scientific officers, technical officers, engineering assistants and technicians	77
Draftsmen	49
Secretarial assistants, typists and machinists	33
Other classifications	21
Total	401

The distribution of the staff to the various locations of the Department was as follows:—

Head Office, Murray Street, Hobart	....	....	....	....	222
South-East District Office, Derwent Park	....	....	....	....	22
North-East District Office, Launceston	....	....	....	....	43
North-West District Office, Ulverstone	....	....	....	....	40
Materials Laboratory, Derwent Park	....	....	....	....	29
Central Workshops and Stores, Moonah	....	....	....	....	45
Total	....	....	....	....	401

The more significant appointments during the year were the promotion of Mr D. S. Mitchell to the position of Bridge Maintenance Engineer and the promotion of Mr F. J. Drake to the position of Chief Accountant.

Four officers retired during the year. Those with long periods of service were:—

Mr H. F. Ginn, Bridge Maintenance Engineer—40 years service.

Mr R. L. Gillie, Plant Superintendent—30 years service.

Property Acquisitions

During the year a total of 201 property acquisitions were commenced and at 30 June 1978, 430 acquisitions were in progress, of which twenty-four were subject to compulsory process. This compares with 416 in progress at the end of the previous year, of which thirty-seven were subject to compulsory acquisition. Total expenditure on property acquisitions fell to \$796 379 compared with \$1 678 937 for the preceding year. This considerable reduction was due mainly to completion of most of the acquisitions required for some major new works in progress and to an increase in work on reconstruction on existing roads which requires less acquisition of property.

Major areas of expenditure were the property acquisitions for construction of the Eastern Outlet Road in Launceston, the Ulverstone By-pass and the Eastern Outlet Road in Hobart, and for the reconstruction of the Midland Highway from Bagdad to Melton Mowbray.

A number of residential properties have been acquired in advance of requirements and fifty-nine are presently let to tenants. A total of fifty-eight vacant areas of land are also leased out.

Contracts and Agreements

Following the division of the former Department of Public Works and the reconstitution of the Board of Tenders for Public Works to consider tenders called by the Department of Housing and Construction, it was necessary to establish a new Contracts and Tenders Committee under the authority of the Minister for Main Roads and Transport to deal with tenders called by the Department of Main Roads. The Committee comprises the Director, Assistant Director and Secretary of the Department of Main Roads and has functions and responsibilities similar to those laid down for the Board of Tenders for Public Works.

Internal Audit

The Internal Audit Section continued its important task of assisting other sections in identifying and rectifying deficiencies in accounting and resource management within the Department. During the year reviews were made of administrative, accounting, clerical and stores procedures in some Head Office sections and in District Offices. A major investigation was made into the methods for engagement of and payment for private plant and the recommendations made in the subsequent report are now being examined. An internal audit examination was also made of the procedure and controls for payment of accounts, and this has resulted in the implementation of a number of recommendations which should improve efficiency.

Study Courses and Staff Development

The Department has continued its policy of providing scholarships which pay fees and a living allowance for the study of engineering and surveying at the University of Tasmania. Currently there are three scholarship holders in the engineering faculty and one in surveying. At 30 June 1978, thirty-one staff were undertaking Technical College courses part-time in conjunction with their employment in the Department. During the year twenty-two training and familiarisation courses were held to assist staff in developing their abilities and their knowledge of the Department and its operations. In addition, selected officers attended external training courses, seminars and meetings arranged by organisations in both the public and private sectors.

Stores

The construction and plant stores requirements of the Department are serviced by a decentralised stores system with the principal store in the main workshop complex at Moonah and branch stores at Launceston and Ulverstone.

Because of the high costs of holding stocks of plant and construction stores, close control is exercised over purchasing and stores holding policies to keep stocks at a low level and at the same time avoid costly delays to plant operations and works due to non-availability of essential items. To achieve lower stock holdings, increasing reliance is being placed on local and contract suppliers and staff resources are being directed towards location of reliable suppliers and follow-up of orders to expedite delivery. In a further step to achieve a reduction in funds tied up in Departmental stores, many basic automotive items are being held on consignment from suppliers.

The total value of all stores on issue during the year was \$1 680 000. At 30 June 1978, the value of stores in stock was \$693 000, a decrease of \$51 000 on the opening figure.

Industrial

As in the previous year, wage increases received by award employees were mainly the result of decisions made in National Wage Cases. No time was lost during the year due to industrial causes. At the end of the year the numbers of employees engaged in workshops and in field operations were:—

Workshops and depots	....	....	....	....	....	....	....	....	....	288
Road and bridge construction and maintenance	....	....	....	....	....	....	....	....	....	949
Total	....	....	....	....	....	....	....	....	....	1 237

Rehabilitation

The Rehabilitation Committee considered the cases of twenty-three employees who, through sickness or injury, had become disabled and either needed long-term treatment or rehabilitation by placement in alternative employment. The Committee was able to assist in many of the cases. However, it is apparent that because of the high average age of Departmental employees the incidence of referrals to the Committee will rise in the coming years and it will become increasingly difficult to find alternative employment.

Industrial Safety

Accident prevention programs were continued in workshops and on field operations in all districts. The programs included instruction courses for all grades of employees, appropriate induction courses for first year apprentices and more advanced workshop safety courses for other apprentices. Courses relating to shot firing, scaffolding and crane operations were provided for specialist employees on various projects.

Investigations were made into problems of excess noise in the operation of machinery and plant and, where possible, measures were taken to reduce noise or provide protection to employees. Audio testing of all workshop employees was carried out to establish a hearing record of each individual. This testing will be extended in 1978-79 to cover all field employees.

Although the number of disabling injuries was less than in the preceding year, the improvements achieved in job safety in some areas of activity were only marginal. During the coming year more attention will be given to supervision and site training aimed at achieving a greater reduction in the number and severity of lost-time accidents.

A decision has been taken to require pre-employment medical examinations for all future employees and arrangements for this will be completed during next year.

ACKNOWLEDGEMENTS

The manner in which the staff and employees of the Department have carried out their work during the year is very much appreciated and I record my thanks for their efforts. My thanks are also extended to all Commonwealth and State Departments, other State Road Authorities and Local Government bodies which have co-operated with and provided assistance to the Department during the year.

G. E. C. McKERCHER, Director of Main Roads

Annexure A
DIRECT EXPENDITURE ON CLASSIFIED ROADS 1977-78

<i>District</i>	<i>Maintenance</i>	<i>Construction and Reconstruction</i>	<i>Resealing</i>	<i>Total</i>
South-East	1 499 990	7 505 102	379 140	9 384 232
North-East	1 289 896	4 988 324	412 060	6 690 280
North-West	1 138 085	3 484 872	388 740	5 011 697
West	350 081	63 806	62 766	476 653
Total	4 278 052	16 042 104	1 242 706	21 562 862
1976-77	3 695 832	16 198 954	945 084	20 839 870
% increase on 1976-77	+16.0	-1.0	+31.50	+3.50

(Expenditure on bridgeworks not included.)

Annexure B
LOAN FUND EXPENDITURE 1977-78

1976-77		1977-78
	<i>Roads and Bridges</i>	
350 000	Bridge renewals generally	350 000
500 000	Eastern Outlet Road, Hobart	1 200 000
1 000 000	Northern Outlet Road, Hobart	200 000
507 456	Tasman Highway, Scottsdale to Ringarooma Turnoff	500 000
500 000	Huon Highway, Huonville to Geeveston	500 000
500 000	Strahan, Zeehan Road	500 000
164 628	Illawarra Main Road, Deviation at Longford	300 000
400 000	West Tamar Highway	300 000
375 000	Tasman Bridge widening	....
271 620	East Tamar Outlet	....
197 296	Southern Outlet Road, Hobart	....
400 000	Blessington Main Road	....
200 000	Waratah Highway, Somerset to Yolla	....
100 000	Lilydale Main Road, Rocherlea to Prossers Forest	....
382 620	Refund to Consolidated Revenue for Administration	270 000
5 848 620	TOTAL (Roads and Bridges)	4 120 000
	<i>Other Works</i>	
24 047	Launceston Flood Protection	63 427
203 189	Jetties and Facilities for Fishermen	199 982
227 236	TOTAL (Other Works)	263 409
6 075 856	TOTAL (All Works)	4 383 409

Annexure C
FINANCIAL ASSISTANCE TO LOCAL GOVERNMENT AUTHORITIES 1977-78

<i>Direct Grants—</i>	<i>\$</i>
Rural Arterial Roads—Construction	189 300
Rural Local Roads—Construction	1 772 507
Maintenance	1 556 257
Urban Arterial Roads—Construction	180 900
Urban Local Roads—Construction	1 074 638
Maintenance	167 586
Minor Improvements for Traffic Engineering and Road Safety	140 489
TOTAL (Direct Grants to Councils)	5 081 677
<i>Work on Council Roads Financed and Carried out by D.M.R.—</i>	
Repair and Renewal of Bridges	1 097 652
Roadworks	162 320
TOTAL Financial Assistance to Councils	6 341 649

Annexure D
BITUMINOUS SURFACING COMPLETED 1977-78 (km)

Road	Sprayed Seals			Total
	Prime and Seal	Reseal	Asphalt	
South-East District—				
Brooker Avenue	....	....	2.34	2.34
Channel Highway	....	10.97	....	10.97
East Derwent Highway	....	....	0.53	0.53
Eastern Outlet	....	1.37	0.67	2.04
Huon Highway	2.71	2.39	....	5.10
Lake Highway	....	20.50	....	20.50
Lyell Highway	1.28	....	....	1.28
Midland Highway	4.30	....	....	4.30
Northern Outlet	1.64	....	1.70	3.34
Southern Outlet	....	....	*4.05	4.05
Tasman Highway	3.52	....	0.15	3.67
Colebrook Main Road	....	1.94	....	1.94
Elderslie Main Road	6.10	....	....	6.10
Fenton Main Road	....	0.20	....	0.20
Kingston Main Road	....	....	0.23	0.23
Lollara Main Road	....	0.06	....	0.06
Nicholls Rivulet Main Road	....	13.23	....	13.23
Tunnack Main Road	....	3.19	....	3.19
Boyer Secondary Road	....	0.25	....	0.25
Bream Creek Secondary Road	1.83	....	....	1.83
Nubeena Secondary Road	4.62	....	....	4.62
Randalls Bay Secondary Road	3.06	....	....	3.06
Ranelagh Secondary Road	0.06	....	....	0.06
North-West District—				
Bass Highway	12.24	13.39	7.28	32.91
Lake Highway	....	5.31	....	5.31
Waratah Highway	5.77	....	1.60	7.37
Zeehan Highway	....	12.98	....	12.98
Frankford Main Road	....	10.41	....	10.41
Irishtown Main Road	....	8.75	....	8.75
King Island Main Road	....	11.40	....	11.40
Montagu Main Road	....	7.47	....	7.47
Cethana Tourist Road	....	8.92	....	8.92
Pardoe Development Road	....	1.74	....	1.74
North-East District—				
Bass Highway	....	13.45	....	13.45
East Tamar Highway	*4.72	2.40	3.55	10.67
Midland Highway	**6.45	3.40	1.20	11.05
Tasman Highway	9.20	18.05	....	27.25
West Tamar Outlet	1.60	....	....	1.60
Bridport Main Road	2.02	....	....	2.02
Blessington Main Road	2.40	....	....	2.40
Esk Main Road	2.60	....	3.20	5.80
Frankford Main Road	....	13.00	....	13.00
Lake Leake Main Road	3.75	....	....	3.75
Lilydale Main Road	4.60	....	....	4.60
Low Head Main Road	0.70	....	....	0.70
Rossarden Secondary Road	3.40	....	....	3.40
Batman Development Road	....	....	2.30	2.30
Total	88.57	184.77	28.80	302.14

* Climbing Lanes

** Includes 2.2 km of Climbing Lanes

In addition to the above 1 km of prime and seal was applied to the Coles Bay Subsidised Road, 0.35 km of asphalt to the Railway Slip Road and 3.07 km of double seal to the Stringer Creek Road for the H.E.C. Pieman River Power Development Project.

Annexure E
ROAD CONSTRUCTION PLANT SUSPENSE ACCOUNT 1977-78
INCOME AND EXPENDITURE STATEMENT

<i>Period Ending</i> 27-3-77 \$		<i>Period Ending</i> 26-3-78 \$
	<i>Income—</i>	
	<i>Earnings—</i>	
5 265 029	Plant Hire	6 133 099
3 420 014	Workshop Charges	4 138 603
6 259	Other Income	6 875
221 938	Net Profit on Sale of Plant and Stores and Stocktaking Adjustments	210 881
<u>8 913 240</u>		<u>10 489 458</u>
	<i>Expenditure—</i>	
3 868 355	Plant Operation and Maintenance	4 422 774
3 277 034	Workshop Operation	3 807 516
351 331	Plant Depot Administration and Maintenance	350 956
865 067	Provision for Depreciation of Plant Equipment and Buildings	1 083 003
4 978	Net Loss on Sale and Write-off of Plant Stores and Stocktaking Adjustments	34 757
<u>8 366 765</u>		<u>9 699 006</u>
546 475	Excess of Income over Expenditure for Period	790 452
<u>8 913 240</u>		<u>10 489 458</u>

BALANCE SHEET

<i>1976-77</i> \$			<i>1977-78</i> \$
	<i>NATURE AND SOURCE OF FUNDS USED—</i>		
	<i>Funds provided by State Treasurer:—</i>		
194 607	Valuation of Plant and Equipment	194 607	
3 010 100	Loan Funds	3 065 200	
6 769	Commonwealth Grant	6 769	
309 434	State Highways Trust Fund	309 434	
1 225 000	Plant Replacement Reserve	1 725 000	
1 337 526	Accumulation Account	1 627 977	
			<u>6 928 987</u>
	<i>Current Liabilities—</i>		
92 053	Sundry Creditors Store	97 738	
422 128	Accrued Expenses	424 481	522 219
	<i>Provisions—</i>		
17 483	Motor Vehicle Insurance	15 122	
6 064	Plant Accident Insurance	5 756	20 878
<u>6 621 164</u>			<u>7 472 084</u>
	<i>THESE FUNDS ARE REPRESENTED BY—</i>		
	<i>Current Assets—</i>		
236 747	Cash at Treasury	631 595	
339 144	Stock on Hand	323 885	
21 624	Work in Progress—Deferred Charges	78 789	
	<i>Accrued Charges—</i>		
501 172	Plant Hire	515 839	
81 594	Stores Issues	57 804	
305 328	Workshops	265 540	
12 375	Depot Improvements		
2 432	Apprentice Tool Kits	2 744	841 927
			<u>1 876 196</u>
	<i>Fixed Assets—</i>		
10 626 215	Land, Buildings, Plant, Equipment at cost	11 634 529	
(5 505 377)	Less Provision for Depreciation	6 038 641	5 595 888
<u>6 621 164</u>			<u>7 472 084</u>

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

1976-77 \$		1977-78 \$
	<i>Source of Funds—</i>	
546 475	Profit from Operations	790 453
865 067	Add Non-Cost Item Depreciation	1 083 003
1 411 542		1 873 456
218 260	Less Profit on Sale of Plant Less Costs	205 869
1 193 282		1 667 587
316 168	Proceeds from Sale of Plant	382 972
....	Proceeds from Loan Funds	55 100
302 263	Decrease in Working Capital .....	....
547	Increase in Provision for Motor Vehicle Insurance .....	....
....	Increase in Provision for Plant Accident Fund .....	....
1 812 260		2 105 659
	<i>Application of Funds—</i>	
....	Increase in Working Capital	367 833
6 679	Decrease in Provision for Plant Accident Fund	308
....	Decrease in Provision for Motor Vehicle Insurance	2 361
59 136	Improvements to Plant Depots	48 089
....	Additions to Amenities Building, Moonah	55 100
476 529	Purchase of New Plant	351 294
1 239 612	Purchase of Replacement Plant	1 251 047
30 304	Purchase of Workshop Equipment	29 627
1 812 260		2 105 659